

**Joint Polar Satellite System (JPSS) Ground Project**

**Code 474**

**474-00448-01-25-B0200**

**Joint Polar Satellite System (JPSS)  
Algorithm Specification Volume I:  
Software Requirement Specification  
(SRS) for the Sea Surface Temperature**

**Block 2.0.0**



National Aeronautics and  
Space Administration

**Goddard Space Flight Center**  
**Greenbelt, Maryland**

# **Joint Polar Satellite System (JPSS) Algorithm Specification Volume I: Software Requirement Specification (SRS) for the Sea Surface Temperature JPSS Review/Approval Page**

**Prepared By:**

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JPSS Ground System  
(Electronic Approvals available online at [https://jpssmis.gsfc.nasa.gov/frontmenu\\_dsp.cfm](https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm))

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**Goddard Space Flight Center  
Greenbelt, Maryland**

## **Preface**

This document is under JPSS Ground Project configuration control. Once this document is approved, JPSS approved changes are handled in accordance with Class I and Class II change control requirements as described in the JPSS Configuration Management Procedures, and changes to this document shall be made by complete revision.

Any questions should be addressed to:

JPSS Configuration Management Office  
NASA/GSFC  
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## Change History Log

Revision	Effective Date	Description of Changes (Reference the CCR & CCB/ERB Approve Date)
Rev-	August 22, 2013	This version incorporates 474-CCR-13-1126 which was approved by JPSS Ground ERB on the effective date shown.
A	Jan 09, 2014	This version incorporates 474-CCR-13-1404 and 474-CCR-13-1360 which was approved by JPSS Ground ERB on the effective date shown.
A1	Oct 23, 2014	This version incorporates 474-CCR-14-2091 which was approved by the JPSS Ground ERB for CO10 on the effective date shown.
B	Dec 05, 2014	This version incorporates 474-CCR-14-1721, 474-CCR-14-1741, 474-CCR-14-1781, 474-CCR-14-1793, 474-CCR-14-2110 and 474-CCR-14-2132 which was approved by JPSS Ground ERB on the effective date shown.
0200C	Sep 22, 2016	This version incorporates 474-CCR-15-2452, 474-CCR-15-2480, 474-CCR-15-2657, 474-CCR-16-2882, 474-CCR-16-2939, and 474-CCR-16-3049, which was approved by JPSS Ground ERB on the effective date shown.

## List of Waivers

Section / Requirement	Deviation / Waiver #	Date Approved	CCR #	Description	Mission
3.1.1 / SRS.01.25_216	NJO-2014-042, Rev A	5/31/16	474-CCR-16-2882	Waiver for Ocean Color/Chlorophyll EDR Performance Requirements	S-NPP JPSS-1 JPSS-2
3.1.1 / SRS.01.25_217	NJO-2014-042, Rev A	5/31/16	474-CCR-16-2882	Waiver for Ocean Color/Chlorophyll EDR Performance Requirements	S-NPP JPSS-1 JPSS-2
3.1.1 / SRS.01.25_218	NJO-2014-042, Rev A	5/31/16	474-CCR-16-2882	Waiver for Ocean Color/Chlorophyll EDR Performance Requirements	S-NPP JPSS-1 JPSS-2
3.1.1 / SRS.01.25_219	NJO-2014-042, Rev A	5/31/16	474-CCR-16-2882	Waiver for Ocean Color/Chlorophyll EDR Performance Requirements	S-NPP JPSS-1 JPSS-2
3.1.1 / SRS.01.25_220	NJO-2014-042, Rev A	5/31/16	474-CCR-16-2882	Waiver for Ocean Color/Chlorophyll EDR Performance Requirements	S-NPP JPSS-1 JPSS-2
3.2.2 / SRS.01.25_206	NJO-2014-042, Rev A	5/31/16	474-CCR-16-2882	Waiver for Ocean Color/Chlorophyll EDR Performance Requirements.	S-NPP JPSS-1 JPSS-2

**Table of TBDs/TBRs**

<b>TBx</b>	<b>Type</b>	<b>ID</b>	<b>Text</b>	<b>Action</b>
None				

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## 1 Introduction

The Joint Polar Satellite System (JPSS) is the National Oceanic and Atmospheric Administration's (NOAA) next-generation operational Earth observation program that acquires and distributes global environmental data primarily from multiple polar-orbiting satellites. The program plays a critical role in NOAA's mission to understand and predict changes in weather, climate, oceans and coasts, and the space environment, which support the Nation's economy and protect lives and property. The first JPSS satellite mission, the Suomi National Polar-orbiting Partnership (S-NPP) satellite, successfully launched in October 2011. S-NPP, along with the legacy NOAA Polar Operational Environmental Satellites (POES), provides continuous environmental observations. Two JPSS satellites will follow S-NPP: JPSS-1, planned for launch in fiscal year (FY) 2017, with JPSS-2 to follow in FY2021. In the future, the JPSS Polar Follow-On (PFO) provides for two additional missions, JPSS-3 and JPSS-4, as follow-on to the JPSS-2 mission to extend the JPSS Program lifecycle out to 2038.

In addition to the JPSS Program's own satellites operating in the 1330 ( $\pm 10$ ) Local Time of the Ascending Node (LTAN) orbit, NOAA also leverages mission partner assets for complete global coverage. These partner assets include the Department of Defense (DoD) Defense Meteorological Satellite Program (DMSP) operational weather satellites (in the 1730 - 1930 LTAN orbit), the European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT) Meteorological Operational (Metop) satellites (in the 2130 LTAN orbit) and the Japanese Aerospace Exploration Agency (JAXA) Global Change Observation Mission-Water (GCOM-W) satellite (in the 1330 LTAN orbit). JPSS routes Metop data from McMurdo Station, Antarctica to the EUMETSAT facility in Darmstadt, Germany and EUMETSAT, in turn, provides Metop data to NOAA. For GCOM, JPSS routes the GCOM-W data from Svalbard, Norway to the NOAA Satellite Operations Facility (NSOF) in Suitland, MD, processes GCOM-W data and delivers GCOM-W products to the JPSS users who have JAXA permissions.

Additionally, the JPSS Program provides data acquisition and routing support to the DMSP and the WindSat Coriolis Program. JPSS routes DMSP data from McMurdo Station to the 557<sup>th</sup> Weather Wing at Offutt Air Force Base in Omaha, NE. After processing, the 557<sup>th</sup> releases the DMSP data for public consumption over the Internet via the National Geophysical Data Center in Boulder, CO. The JPSS Program provides data routing support to the National Science Foundation (NSF), as well as the National Aeronautics and Space Administration (NASA) Space Communications and Navigation (SCaN)-supported missions, which include the Earth Observing System (EOS). As part of the agreements for the use of McMurdo Station, JPSS provides communications/network services for the NSF between McMurdo Station, Antarctica and Centennial, Colorado.

As a multi-mission ground infrastructure, the JPSS Ground System supports the heterogeneous constellation of the before-mentioned polar-orbiting satellites both within and outside the JPSS Program through a comprehensive set of services as listed in Table 1-1.

**Table: 1-1 JPSS Ground System Services**

Service	Description
Enterprise Management and Ground Operations	Provides mission management, mission operations, ground operations, contingency management and system sustainment
Flight Operations	Provides launch support and early orbit operations, telemetry and commanding, orbital operations, mission data playback, payload support, flight software upgrade, flight vehicle simulation, and disposal at the end of mission life
Data Acquisition	Provides space/ground communications for acquiring mission data
Data Routing	Provides routing of telemetry, mission and/or operations data through JPSS' global data network
Data Product Generation	Provides the processing of mission data to generate and distribute raw, sensor, environmental, and ancillary data products
Data Product Calibration and Validation	Provides calibration and validation of the data products
Field Terminal Support	Provides development and operational support to the Field Terminal customers

## 1.1 Identification

This SRS provides requirements for the VIIRS Sea Surface Temperature (SST) Environmental Data Record (EDR). The SST this document refers to is the one measured by the VIIRS (Visible Infrared Imaging Radiometer Suite) instrument

## 1.2 Algorithm Overview

The algorithm calculates the SST from the infrared radiance retrieval measured by the VIIRS instrument. SST is an input variable for other VIIRS products such as net heat flux in Surface Albedo processing and ocean color/chlorophyll products.

## 1.3 Document Overview

Section	Description
Section 1	Introduction - Provides a brief overview of the JPSS Ground System and the relevant algorithm, as reference material only.
Section 2	Related Documentation - Lists related documents and identifies them as Parent, Applicable, or Information Documents such as, MOAs, MOUs, technical implementation agreements, as well as Data Format specifications. This section also establishes an order of precedence in the event of conflict between two or more documents.
Section 3	Algorithm Requirements - Provides a summary of the science requirements for the products covered by this volume.
Appendix A	Requirements Attributes - Provides the mapping of requirements to verification methodology and attributes.

## 2 Related Documentation

The latest JPSS documents can be obtained from URL: [https://jpssmis.gsfc.nasa.gov/frontmenu\\_dsp.cfm](https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm). JPSS Project documents have a document number starting with 470, 472 or 474 indicating the governing Configuration Control Board (CCB) (Program, Flight, or Ground) that has the control authority of the document.

### 2.1 Parent Documents

The following reference document(s) is (are) the Parent Document(s) from which this document has been derived. Any modification to a Parent Document will be reviewed to identify the impact upon this document. In the event of a conflict between a Parent Document and the content of this document, the JPSS Program Configuration Change Board has the final authority for conflict resolution.

Doc. No.	Document Title
470-00067	Joint Polar Satellite System (JPSS) Ground System Requirements Document (GSRD)
470-00067-02	Joint Polar Satellite System (JPSS) Ground System Requirements Document (GSRD), Volume 2 - Science Product Specification
474-00448-01-01	Joint Polar Satellite System (JPSS) Algorithm Specification Volume I: Software Requirements Specification (SRS) for the Common Algorithms

### 2.2 Applicable Documents

The following document(s) is (are) the Applicable Document(s) from which this document has been derived. Any modification to an Applicable Document will be reviewed to identify the impact upon this document. In the event of conflict between an Applicable Document and the content of this document, the JPSS Program Configuration Change Board has the final authority for conflict resolution.

Doc. No.	Document Title
D0001-M01-S01-010	VIIRS Sea Surface Temperature Algorithm Theoretical Basis Document (ATBD)
474-00448-02-25	Joint Polar Satellite System (JPSS) Algorithm Specification Volume II: Data Dictionary for the Sea Surface Temperature
474-00448-04-25	Joint Polar Satellite System (JPSS) Algorithm Specification Volume IV: Software Requirements Specification Parameter File (SRSPF) for the Sea Surface Temperature

### 2.3 Information Documents

The following documents are referenced herein and amplify or clarify the information presented in this document. These documents are not binding on the content of this document.

Doc. No.	Document Title
474-00333	Joint Polar Satellite System (JPSS) Ground System (GS) Architecture Description Document (ADD)
474-00054	Joint Polar Satellite System (JPSS) Ground System (GS) Concept of Operations (ConOps)

Doc. No.	Document Title
470-00041	Joint Polar Satellite System (JPSS) Program Lexicon
474-00448-03-25	Joint Polar Satellite System (JPSS) Algorithm Specification Volume III: Operational Algorithm Description (OAD) for the Sea Surface Temperature
429-05-02-42	Joint Polar Satellite System (JPSS) Mission Data Format Control Book for NPP
472-00251	Joint Polar Satellite System (JPSS) Mission Data Format Control Book for JPSS-1

### 3 Algorithm Requirements

#### 3.1 States and Modes

##### 3.1.1 Normal Mode Performance

SRS.01.25\_216 The Sea Surface Temperature EDR software shall calculate sea surface skin temperature with a measurement accuracy of 0.2 K.

**Waiver 474-CCR-16-2882:** Waiver for Sea Surface Temperature (SST) EDR Performance Requirements. NOAA accepted the Advanced Clear-Sky Processor for Oceans (ACSPO) Sea Surface Temperature EDR as implemented in the NESDIS S-NPP Data Exploitation Build 1.0 (NDE 1.0) as the single desired product for satisfying Level 1 VIIRS SST EDR requirements imposed on the JPSS Program.

*Rationale:* The measurement accuracy was flowed down from Level 1 and Level 2 documents.

*Mission Effectivity:* S-NPP, JPSS-1, JPSS-2

SRS.01.25\_217 The Sea Surface Temperature EDR software shall calculate sea surface skin temperature with a measurement precision of 0.6 K.

**Waiver 474-CCR-16-2882:** Waiver for Sea Surface Temperature (SST) EDR Performance Requirements. NOAA accepted the Advanced Clear-Sky Processor for Oceans (ACSPO) Sea Surface Temperature EDR as implemented in the NESDIS S-NPP Data Exploitation Build 1.0 (NDE 1.0) as the single desired product for satisfying Level 1 VIIRS SST EDR requirements imposed on the JPSS Program.

*Rationale:* The measurement precision was flowed down from Level 1 and Level 2 documents.

*Mission Effectivity:* S-NPP, JPSS-1, JPSS-2

SRS.01.25\_218 The Sea Surface Temperature EDR software shall calculate sea surface skin temperature with the available refresh rate of 12 hours.

**Waiver 474-CCR-16-2882:** Waiver for Sea Surface Temperature (SST) EDR Performance Requirements. NOAA accepted the Advanced Clear-Sky Processor for Oceans (ACSPO) Sea Surface Temperature EDR as implemented in the NESDIS S-NPP Data Exploitation Build 1.0 (NDE 1.0) as the single desired product for satisfying Level 1 VIIRS SST EDR requirements imposed on the JPSS Program.

*Rationale:* The global coverage through the refresh constraint was flowed from Level 1 and Level 2 document.

*Mission Effectivity:* S-NPP, JPSS-1, JPSS-2

SRS.01.25\_219 The Sea Surface Temperature EDR software shall calculate sea surface skin temperature with a 3-sigma mapping uncertainty of 2 km in worst case scenarios corresponding to swath edge and the 3 sigma mapping uncertainty is 1 km at Nadir.

**Waiver 474-CCR-16-2882:** Waiver for Sea Surface Temperature (SST) EDR Performance Requirements. NOAA accepted the Advanced Clear-Sky Processor for Oceans (ACSPO) Sea Surface Temperature EDR as implemented in the NESDIS S-NPP Data Exploitation Build 1.0 (NDE 1.0) as the single desired product for satisfying Level 1 VIIRS SST EDR requirements imposed on the JPSS Program.

*Rationale:* The mapping uncertainty was flowed down from Level 1 and Level 2 documents.

*Mission Effectivity:* S-NPP, JPSS-1, JPSS-2

SRS.01.25\_220 The Sea Surface Temperature EDR software shall calculate sea surface skin temperature with a measurement range of 271 K to 313 K.

**Waiver 474-CCR-16-2882:** Waiver for Sea Surface Temperature (SST) EDR Performance Requirements. NOAA accepted the Advanced Clear-Sky Processor for Oceans (ACSPO) Sea Surface Temperature EDR as implemented in the NESDIS S-NPP Data Exploitation Build 1.0 (NDE 1.0) as the single desired product for satisfying Level 1 VIIRS SST EDR requirements imposed on the JPSS Program.

*Rationale:* The measurement range was flowed down from Level 1 and Level 2 documents.

*Mission Effectivity:* S-NPP, JPSS-1, JPSS-2

### **3.1.2 Graceful Degradation Mode Performance**

SRS.01.25\_212 The Sea Surface Temperature EDR software shall use NAAPS current forecast aerosol optical thickness data as a primary backup source, NAAPS extended forecast aerosol optical thickness data as a secondary backup source, and GACP climatology data as a tertiary backup source, when VIIRS aerosol optical thickness IP is not available.

*Rationale:* The EDR software through its algorithm must generate products using back up data sources to meet the graceful degradation requirement. These degraded products are not required to meet the algorithm performance requirements.

*Mission Effectivity:* S-NPP, JPSS-1, JPSS-2

SRS.01.25\_213 The Sea Surface Temperature EDR software shall use NCEP extended forecast surface temperature data as a primary backup source, when NCEP current surface temperature data is not available.

*Rationale:* The EDR software through its algorithm must generate products using back up data sources to meet the graceful degradation requirement. These degraded products are not required to meet the algorithm performance requirements.

*Mission Effectivity:* S-NPP, JPSS-1, JPSS-2

## **3.2 Algorithm Functional Requirements**

### **3.2.1 Product Production Requirements**

Not applicable.

### 3.2.2 Algorithm Science Requirements

SRS.01.25\_206 The Sea Surface Temperature EDR software shall incorporate a computing algorithm provided for sea surface skin temperature.

**Waiver 474-CCR-16-2882:** Waiver for Sea Surface Temperature (SST) EDR Performance Requirements. NOAA accepted the Advanced Clear-Sky Processor for Oceans (ACSPO) Sea Surface Temperature EDR as implemented in the NESDIS S-NPP Data Exploitation Build 1.0 (NDE 1.0) as the single desired product for satisfying Level 1 VIIRS SST EDR requirements imposed on the JPSS Program. No improved or updated code is planned to be delivered to IDPS in Ground System for this algorithm.

*Rationale:* The EDR software through its computing algorithm must produce the sea surface skin temperature in accordance with the JPSS VIIRS Sea Surface Temperature ATBD (D0001-M01-S01-010).

*Mission Effectivity:* S-NPP, JPSS-1, JPSS-2

### 3.2.3 Algorithm Exception Handling

SRS.01.25\_209 The Sea Surface Temperature EDR software shall set each <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for Sea Surface Temperature (474-00448-04-25) <SeaSurfTemp\_EDR><fill>.

*Rationale:* The EDR software through its computing algorithm must fill the sea surface temperature values based on the established fill conditions to satisfy exclusion and fill conditions.

*Mission Effectivity:* S-NPP, JPSS-1, JPSS-2

## 3.3 External Interfaces

### 3.3.1 Inputs

SRS.01.25\_214 The Sea Surface Temperature EDR software shall incorporate inputs per Table 3-1.

*Rationale:* The EDR generation software must be able to receive and process the resource interaction items shown in Table 3-1 in order to produce the intended Sea Surface Temperature products.

*Mission Effectivity:* S-NPP, JPSS-1, JPSS-2

SRS.01.25\_309 The Sea Surface Temperature software shall ingest tables and coefficients formatted in accordance with Section 7 of the JPSS Algorithm Specification Vol II: Data Dictionary for Sea Surface Temperature (474-00448-02-25).

*Rationale:* This defines the formats for Lookup Tables, and Processing Coefficients for input into the algorithm module.

*Mission Effectivity:* S-NPP, JPSS-1, JPSS-2

Table 3-1 and Figure 3-1 are best viewed together since they describe the processes governed by this SRS in different ways. The figure diagrams the data flowing into, out of, and within the code governed by this SRS. The table lists these same data interactions as well as all downstream dependencies for outputs from this SRS.

Each row in the table describes a single software interaction - data flowing from one software item to another. The data is listed in the first column. The second column includes the mnemonic or short name for the data. Blanks indicate there is no mnemonic. The third and fourth columns contain the SRS that generates the data product(s) in the first column, and the SRS that receives those products. The final two columns contain the actual function name in Algorithm Development Library (ADL) that produces those products, and the function that inputs those products. The SRS's titled "Ingest MSD" and "Store/Retrieve" are non-existent SRS's functioning as data handling for the IDPS. The software functions "Store Products" and "Retrieve Products" are similar non-existent functions that operate as IDPS data handling.



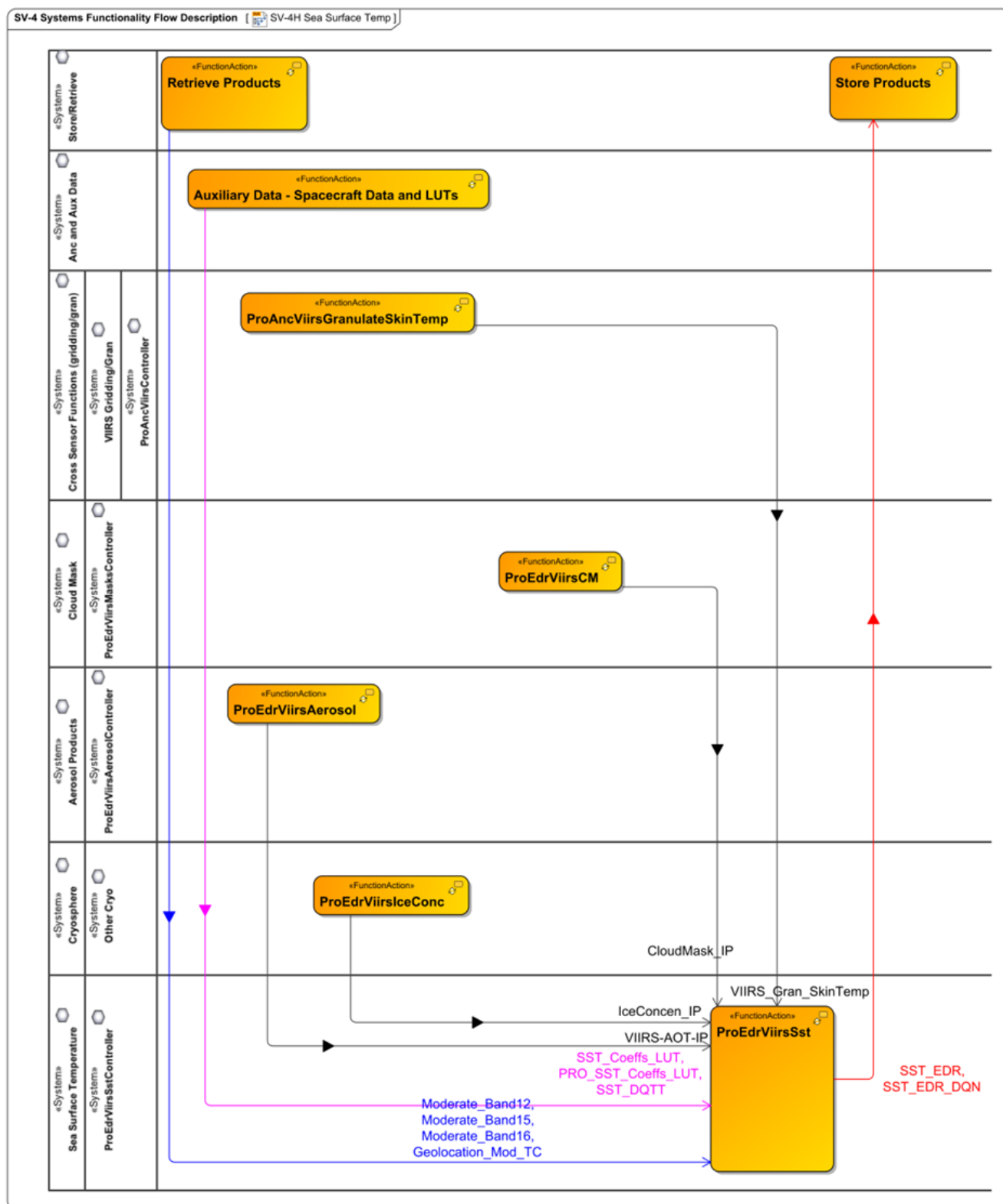


Figure: 3-1 Sea Surface Temperature Data Flows

**Table: 3-1 Systems Resource Flow Matrix: Sea Surface Temperature**

<b>Data Product Name</b>	<b>Mnemonic or Short Name, if applicable</b>	<b>Source SRS</b>	<b>Receiving SRS</b>	<b>Sending Function</b>	<b>Receiving Function</b>
Moderate_Band12 Moderate_Band15 Moderate_Band16 Geolocation_Mod_TC	SDRE-VM12-C0030 SDRE-VM15-C0030 SDRE-VM16-C0030 VIIRS-MOD-RGEO-TC	VIIRS RDR/SDR	Sea Surface Temperature	Retrieve Products	ProEdrViirsSst
VIIRS_Grain_SkinTemp	VIIRS-ANC-Temp-Skin-Mod-Gran	Grid/Gran	Sea Surface Temperature	ProAncViirsGranulateSkinTemp	ProEdrViirsSst
IceConcen_IP	IMPE_VIIC_R0100	Cryosphere	Sea Surface Temperature	ProEdrViirsIceConc	ProEdrViirsSst
SST_Coeffs_LUT PRO_SST_Coeffs_LUT SST_DQTT	NP_NU-LM0233-018 VIIRS-SST-EDR-AC-IntDP_NU-LM2030-000	Anc and Aux Data	Sea Surface Temperature	Auxiliary Data - Spacecraft Data and LUTs	ProEdrViirsSst
VIIRS-AOT-IP	IMPE_VAOT_R0100	Aerosols	Sea Surface Temperature	ProEdrViirsAerosol	ProEdrViirsSst
CloudMask_IP	IMPE_CMIP_C0030	Cloud Mask	Sea Surface Temperature	ProEdrViirsCM	ProEdrViirsSst
SST_EDR	EDRE-SSTE-C1030	Sea Surface Temperature	Surface Albedo	ProEdrViirsSst	ProEdrViirsNHF
SST_EDR	EDRE-SSTE-C1030	Sea Surface Temperature	Ocean Color and Chlorophyll	ProEdrViirsSst	ProEdrViirsOCC
SST_EDR SST_EDR_DQN	EDRE-SSTE-C1030 DP_NU-L00090-001	Sea Surface Temperature	Store/Retrieve	ProEdrViirsSst	Store Products

### 3.3.2 Outputs

SRS.01.25\_210 The Sea Surface Temperature EDR software shall generate the Sea Surface Temperature EDR product in conformance with the XML format file in Attachment ATT-1 of the JPSS Algorithm Specification Vol II: Data Dictionary for Sea Surface Temperature (474-00448-04-25).

*Rationale:* The product profile must conform to the XML format file.

*Mission Effectivity:* S-NPP, JPSS-1, JPSS-2

SRS.01.25\_211 The Sea Surface Temperature EDR software shall use the terrain-corrected geolocation from the VIIRS M-band.

*Rationale:* The Sea Surface Temperature products must be associated with the terrain-corrected geolocation.

*Mission Effectivity:* S-NPP, JPSS-1, JPSS-2

### **3.4 Science Standards**

Not applicable.

### **3.5 Metadata Output**

Not applicable.

### **3.6 Quality Flag Content Requirements**

SRS.01.25\_221 The Sea Surface Temperature EDR software shall report for each <FlagScope> quality flags using <FlagLogic> as specified in the JPSS Algorithm Specification Vol IV: SRSPF for Sea Surface Temperature (474-00448-04-25) <SeaSurfTemp\_EDR><QF>.

*Rationale:* Quality Flags must be generated based on the established flag conditions, logic, and format.

*Mission Effectivity:* S-NPP, JPSS-1, JPSS-2

### **3.7 Data Quality Notification Requirements**

SRS.01.25\_215 The Sea Surface Temperature EDR software shall send data quality notifications to the operator according to logic specified in the JPSS Algorithm Specification Vol IV: SRSPF for Sea Surface Temperature (474-00448-04-25) <SeaSurfTemp\_EDR><notification>.

*Rationale:* Notifications must be generated and sent based on the established logic and conditions.

*Mission Effectivity:* S-NPP, JPSS-1, JPSS-2

### **3.8 Adaptation**

Not applicable.

### **3.9 Provenance Requirements**

Not applicable.

### **3.10 Computer Software Requirements**

Not applicable.

### **3.11 Software Quality Characteristics**

Not applicable.

### **3.12 Design and Implementation Constraints**

SRS.01.25\_208 The JPSS Common Ground System shall execute the sea surface temperature algorithms.

*Rationale:* The CGS must incorporate algorithm changes that are supplied by the algorithm vendor.

*Mission Effectivity:* S-NPP, JPSS-1, JPSS-2

### **3.13 Personnel Related Requirements**

Not applicable.

### **3.14 Training Requirements**

Not applicable.

### **3.15 Logistics Related requirements**

Not applicable.

### **3.16 Other Requirements**

Not applicable.

### **3.17 Packaging Requirements**

Not applicable.

### **3.18 Precedence and Criticality**

Not applicable.

**Appendix A. Requirements Attributes**

The Requirements Attributes Table lists each requirement with CM-controlled attributes including requirement type, mission effectivity, requirement allocation(s), block start and end, method(s) for verifying each requirement, etc

DOORS ID	SRS 25 - Sea Surface Temperature	Level 3 Type	Product Type	Mission Effectivity	Allocated To	Block Start	Block End
SRS.01.25_216	The Sea Surface Temperature EDR software shall calculate sea surface skin temperature with a measurement accuracy of 0.2 K.	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0
SRS.01.25_217	The Sea Surface Temperature EDR software shall calculate sea surface skin temperature with a measurement precision of 0.6 K.	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0
SRS.01.25_218	The Sea Surface Temperature EDR software shall calculate sea surface skin temperature with the available refresh rate of 12 hours.	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0
SRS.01.25_219	The Sea Surface Temperature EDR software shall calculate sea surface skin temperature with a 3-sigma mapping uncertainty of 2 km in worst case scenarios corresponding to swath edge and the 3 sigma mapping uncertainty is 1 km at Nadir.	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0
SRS.01.25_220	The Sea Surface Temperature EDR software shall calculate sea surface skin temperature with a measurement range of 271 K to 313 K.	P	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0
SRS.01.25_212	The Sea Surface Temperature EDR software shall use NAAPS current forecast aerosol optical thickness data as a primary backup source, NAAPS extended forecast aerosol optical thickness data as a secondary backup source, and GACP climatology data as a tertiary backup source, when VIIRS aerosol optical thickness IP is not available.	G	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0
SRS.01.25_213	The Sea Surface Temperature EDR software shall use NCEP extended forecast surface temperature data as a primary backup source, when NCEP current surface temperature data is not available.	G	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0
SRS.01.25_206	The Sea Surface Temperature EDR software shall incorporate a computing algorithm provided for sea surface skin temperature.	Ap	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0
SRS.01.25_209	The Sea Surface Temperature EDR software shall set each <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for Sea Surface Temperature (474-00448-04-25) <SeaSurfTemp_EDR><fill>.	E	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0

DOORS ID	SRS 25 - Sea Surface Temperature	Level 3 Type	Product Type	Mission Effectivity	Allocated To	Block Start	Block End
SRS.01.25_214	The Sea Surface Temperature EDR software shall incorporate inputs per Table 3-1.	I	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0
SRS.01.25_309	The Sea Surface Temperature software shall ingest tables and coefficients formatted in accordance with Section 7 of the JPSS Algorithm Specification Vol II: Data Dictionary for Sea Surface Temperature (474-00448-02-25).	Ft	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0
SRS.01.25_210	The Sea Surface Temperature EDR software shall generate the Sea Surface Temperature EDR product in conformance with the XML format file in Attachment ATT-1 of the JPSS Algorithm Specification Vol II: Data Dictionary for Sea Surface Temperature (474-00448-04-25).	F	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0
SRS.01.25_211	The Sea Surface Temperature EDR software shall use the terrain-corrected geolocation from the VIIRS M-band.	Fg	GEO	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0
SRS.01.25_221	The Sea Surface Temperature EDR software shall report for each <FlagScope> quality flags using <FlagLogic> as specified in the JPSS Algorithm Specification Vol IV: SRSPF for Sea Surface Temperature (474-00448-04-25) <SeaSurfTemp_EDR><QF>.	Q	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0
SRS.01.25_215	The Sea Surface Temperature EDR software shall send data quality notifications to the operator according to logic specified in the JPSS Algorithm Specification Vol IV: SRSPF for Sea Surface Temperature (474-00448-04-25) <SeaSurfTemp_EDR><notification>.	N	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0
SRS.01.25_208	The JPSS Common Ground System shall execute the sea surface temperature algorithms.	Ai	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0